

# **ABSTRACT**

A method of forming a semiconductor on insulator structure in a monolithic semiconducting substrate with a bulk semiconductor structure. A first portion of a surface of the monolithic semiconducting substrate is recessed without effecting a second portion of the surface of the monolithic semiconducting substrate. An insulator precursor species is implanted beneath the surface of the recessed first portion of the monolithic semiconducting substrate, and a trench is etched around the implanted and recessed first portion of the monolithic semiconducting substrate. The insulator precursor species is activated to form an insulator layer beneath the surface of the recessed first portion of the monolithic semiconducting substrate. The semiconductor on insulator structure is formed in the first portion of the monolithic semiconducting substrate, and the bulk semiconductor structure is formed in the second portion of the monolithic semiconducting substrate.

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